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(54) **METHOD AND SYSTEM FOR OBJECT DETECTION IN DIGITAL IMAGES**

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G06K 9/62 (2006.01)

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See application file for complete search history.

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(57) **ABSTRACT**

An object detection system for detecting instances of an object in a digital image includes an image integrator and an object detector, which includes a classifier (classification function) and image scanner. The image integrator receives an input image and calculates an integral image representation of the input image. The image scanner scans the image in same sized subwindows. The object detector uses a cascade of homogenous classification functions or classifiers to classify the subwindows as to whether each subwindow is likely to contain an instance of the object. Each classifier evaluates one or more features of the object to determine the presence of such features in a subwindow that would indicate the likelihood of an instance of the object in the subwindow.

37 Claims, 8 Drawing Sheets